

In The Claims

Claims 7 and 11 have been cancelled without prejudice.

Claim 1 has been amended as follows:

1. (Amended) A linear chemical mechanical polishing apparatus equipped with a programmable pneumatic support platen comprising:

a wafer carrier for holding and rotating a wafer mounted thereon with a first surface to be polished exposed and facing downwardly;

AJ a continuous belt for mounting a plurality of polishing pads thereon;

a motor means for providing rotational motion in a predetermined direction of said continuous belt; and

a support platen situated juxtaposed to a bottom surface of said continuous belt corresponding to a position of said wafer carrier so as to force said polishing pad against said first surface of the wafer, said support platen having a predetermined thickness, a plurality of apertures therethrough and a plurality of openings in a top surface in fluid communication with a gas source through said plurality of apertures, said plurality of openings having different diameters.

Claim 15 has been amended as follows:

15. (Amended) A method for controlling the polishing profile on a wafer surface during a linear (CMP) process comprising the steps of:

AB providing a linear CMP apparatus comprising a wafer carrier for holding and rotating a wafer mounted thereon with a first surface to be polished exposed and facing downwardly; a continuous belt for mounting a plurality of polishing pads thereon; a motor means for providing rotational motion of said continuous belt; and a support platen situated juxtaposed to a bottom surface of said continuous belt corresponding to a position of said wafer carrier, said support platen having a predetermined thickness, a plurality of apertures therethrough and a plurality of openings in a top surface in fluid communication with a gas source;

rotating said continuous belt in a predetermined direction;

engaging said first surface of the wafer to said polishing pad;

flowing a gas flow through said plurality of apertures and said plurality of openings and forcing an intimate contact between said first surface of the wafer and said polishing pad;

detecting a pressure of gas flow through a preselected zone incorporating a preselected plurality of openings and sending a first signal to a process controller;

comparing said first signal with a pre-stored value in the process controller and sending a second signal to a flow regulator responsive to said preselected zone; and

AB altering said pressure of said gas flow responsive to said second signal until said first signal substantially equals to said pre-stored value in the process controller.

(Claim 16 has been amended as follows)

16. (Amended) A method for controlling the polishing profile on a wafer surface during a linear CMP process according to claim 15 further comprising the step of flowing a gas flow of air or nitrogen through said plurality of apertures and said plurality of openings.

[Claim 17 has been amended as follows:]

AB 17. (Amended) A method for controlling the polishing profile on a wafer surface during a linear CMP process according to claim 15 further comprising the step of dividing said plurality of openings in at least three zones wherein each zone being arranged in a concentric circle.

[Claim 18 has been amended as follows:]

18. (Amended) A method for controlling the polishing profile on a wafer surface during a linear CMP process according to claim 15 further comprising the step of dividing said plurality of openings in about six zones wherein each zone being arranged in a concentric circle.

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REMARKS

Thorough examination and careful review of the application by the Examiner is noted and appreciated.

The indication by the Examiner that claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the